

The opinion in support of the decision being entered today is  
*not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JOHN R. SCHNEIDER, DEIRDRE D. RAGAN,  
KAREN S. RECHENBERG, ANTHONY M. CHASSER,  
and KAREN A. BARKAC

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Appeal 2007-1223  
Application 10/007,149  
Technology Center 1700

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Decided: July 31, 2007

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Before EDWARD C. KIMLIN, CHUNG K. PAK, and  
JEFFREY T. SMITH, Administrative Patent Judges.

SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from a final rejection of claims 1, 6, 10-12, 15-17, 19-24, 26-45, and 50-63. We have jurisdiction under 35 U.S.C. § 6.

The present invention relates to coating compositions having improved mar and scratch resistance. The coating compositions generally comprise a film-forming resin containing a plurality of dispersed organic or inorganic particles having an average particle size ranging from 0.1 to 15 microns (Specification 2). Representative claim 1, as presented in Appellants' Brief, is reproduced below:

1. A powder coating composition comprising:

a film-forming resin; and

a plurality of particles having an average particle size between 1 and 15 microns dispersed in said resin, wherein the particles have a hardness sufficient to impart greater mar and/or scratch resistance as compared to no particle being present, and wherein the difference between the refractive index of the resin and the refractive index of the particles is less than one.

The Examiner relies on the following references in rejecting the appealed claims:

Christie	US 6,203,906 B1	Mar. 20, 2001
Harashima	US 6,362,267 B1	Mar. 26, 2002

Claims 1, 6, 10-12, 15-17, 19-24, 26-40, 42-45, and 50-58 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Christie; and claims 41 and 59-63 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Christie and Harashima (Answer 3-4). We affirm the rejections.

OPINION

Upon careful review of the respective positions advanced by Appellants and the Examiner, we affirm the rejections for the reasons advanced by the Examiner and add the following primarily for emphasis.

Christie describes powder coatings comprising film forming resins and from 0.05-5% by weight of an abrasion resistant additive such as alumina (col. 1, ll. 45-63). Suitable film forming resins include acrylic polymers, polyester polymers and polyurethane polymers (col. 2, ll. 13-20). Christie discloses the compositions may also comprise aluminum trihydroxide as a filler having a hardness of less than about 7 on the Mohs' scale and having a refractive index of 1.50-1.57 which is disclosed to be the same as many synthetic film forming resins (col. 2, ll. 22-38). Thus, the difference between the refractive index of the particles and the resin would be less than one as required by claim 1. Christie discloses the abrasion resistant additives can be calcined alumina (ground and ungrounded) and tabular alumina (col. 1, ll. 50-52). The ungrounded calcined aluminum preferably has a median particle size of at least about 5.5  $\mu\text{m}$ . The tabular alumina may be milled and formed into spheres (col. 3, ll. 23-65). Christie discloses the abrasion resistant additives preferably have a median particle size ranging from 3-250  $\mu\text{m}$  (col. 3, l. 68-col. 4, l. 5).

The Examiner has addressed the Appellants' separate arguments regarding the various claims in the Answer. Appellants have not specifically refuted many of the positions advanced by the Examiner in a responsive Brief. For example, the Appellants have not refuted the Examiner's assertion that aluminum trihydroxide

filler is the same as the claimed uncalcined alumina specified in claim 10 (Answer 5). The Appellants also have not refuted the Examiner's assertion that it would have been obvious to a person of ordinary skill in the art to utilize the composition of Christie for coating substrates including metallic and polymeric, in multilayered coatings, and coating in thickness specified by the claims (Answer 5-6).

The Appellants' arguments regarding the median particle size of the abrasion resistant additives are not persuasive (Br. 8-10). As indicated above, Christie discloses the preferred particle sizes for the abrasion resistant additive to range from 3-250  $\mu\text{m}$ . As such, a person of ordinary skill in the art would have reasonably expected that the additives having the median particle size of 5.5  $\mu\text{m}$  or slightly less than 3  $\mu\text{m}$  would still possess abrasion resistant properties. *Titanium Metals Corp. of Am. v. Banner*, 778 F.2d 775, 783, 227 USPQ 773, 779 (Fed. Cir. 1985) (holding that a prima facie case of obviousness exists even when the claimed range and the prior art range do not overlap but are close enough such that one skilled in the art would have expected them to have the same properties). Consequently, we conclude that a prima facie case of obviousness has been established.

The Examiner has combined the teachings of Hiroshima to the above teachings of Christie reference in rejecting the subject matter of claims 41 and 59-63. In response to this rejection, the Appellants argue that "the Hiroshima reference does nothing to overcome the deficiencies of Christie in teaching or suggesting the present invention" (Br. 16). Appellants' arguments are not persuasive for the reasons set forth above and in the Answer.

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We note that Appellants have not relied upon evidence of unexpected results to rebut the Examiner's obviousness determination.

#### CONCLUSION

Based on our consideration of the totality of the record before us, having evaluated the prima facie case of obviousness in view of Appellants' arguments, we conclude that the subject matter of claims 1, 6, 10-12, 15-17, 19-24, 26-45, and 50-63 would have been obvious to a person of ordinary skill in the art from the combined teachings of the cited prior art. See *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Accordingly, the Examiner's rejections under 35 U.S.C. § 103 are affirmed.

#### TIME FOR TAKING ACTION

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(iv).

#### AFFIRMED

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PPG Industries, Inc.  
Intellectual Property Department  
One PPG Place  
Pittsburgh, PA 15272